

AIR QUALITY PERMIT

Issued to:	Graymont Western U.S., Inc. P.O. Box 550 Townsend, MT 59644	Permit #1554-16 Administrative Amendment (AA) Request Received: 9/02/04 Department Decision on AA: 09/27/04 Permit Final: 10/13/04 AFS#: 007-0002
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An air quality permit, with conditions, is hereby granted to Graymont Western U.S., Inc. (Graymont), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM), 17.8.701, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Facility Location

Graymont operates a limestone quarry, lime manufacturing facility, and railroad loadout facility in Broadwater County, Montana. The limestone quarry and lime manufacturing plant are located approximately 4½ miles west of Townsend on Indian Creek Road. The quarry is located in Section 33, Township 7 North, Range 1 East and the lime manufacturing facility is located in Section 28, Township 7 North, Range 1 East. The railroad loadout facility is located 1 mile north of Townsend in Section 25, Township 7 North, Range 1 East. A detailed listing of the equipment at Graymont's facility is contained in the permit analysis.

B. Current Permit Action

On September 2, 2004, the Department of Environmental Quality (Department) received notification from Graymont of facility changes in accordance with the provisions of ARM 17.8.745(1) (de minimis rule). Specifically, current coal handling operations involve truck unloading/dumping of coal and transfer of coal to a coal stockpile via a front-end loader. Under the proposed de minimis action, Graymont is adding two portable coal conveyors to accommodate a portion of coal handling activities. Incorporation of the 2 new portable conveyors will result in the addition of 3 new coal material transfer points. The current permit action adds the portable conveyors to the list of equipment at the Graymont facility. An emission inventory demonstrating compliance with the de minimis rule is contained in Section III, Emission Inventory, of the permit analysis to this permit.

In addition to the above cited de minimis notification, Graymont proposed an AA to Permit #1554-15 to allow for baghouse control of quarry drilling operations. Under Permit #1554-15, Graymont is required to use skirting and water spray to control fugitive dust emissions resulting from drilling operations. Under the proposed AA, Graymont would utilize skirting and baghouse control for certain drilling operations and skirting and water spray for other operations. Since the use of skirting and baghouse control would provide equivalent or greater control of fugitive dust when compared to skirting and water spray, the Department determined that this proposed change can be accomplished under an AA. Under the current permit action, Section II.A.4 has been modified to accommodate this operating change.

SECTION II: Limitations and Conditions

A. Operational and Emission Control Requirements

Graymont shall operate and maintain the following emission control equipment and all emission control equipment specified in their application for their Montana Air Quality Permit and all subsequent revisions (ARM 17.8.749).

1. Fall distance shall be minimized during transfer of topsoil, overburden and limestone removal, and during all transfer of material from front-end loaders to trucks (ARM 17.8.752).
2. Fall distance of crushed limestone to storage pile shall be minimized (40 CFR 52.21).
3. All disturbed or exposed areas shall be stabilized with chemicals, mulch, or revegetation.
4. Quarry drilling shall be conducted with skirting and water sprays or skirting with cyclone and fabric filter control.
5. Blasting shall be conducted in such a way as to prevent overshooting.
6. Graymont shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
7. Graymont shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).
8. The coal/coke dump shall be sheltered as necessary to maintain compliance with the 20% opacity limitation (ARM 17.8.308 and 40 CFR 52.21).
9. The primary crusher shall be enclosed and vented to a baghouse (ARM 17.8.749).
10. Emission points for the finished product crushing, storage, and loadout areas shall be enclosed and vented to a baghouse (ARM 17.8.749 and 40 CFR 52.21).
11. The coal bins shall be totally enclosed and vented to a baghouse (ARM 17.8.749 and 40 CFR 52.21).
12. All conveyors that transport finished product (lime) shall be covered.
13. The coal conveyor (C-291) between the silo and the coal mill shall be covered.
14. Product haul trucks shall be covered during transport to the train loadout.
15. Trucks hauling coal from the train loadout to the plant shall be covered.
16. The exhaust gases from the lime kilns shall be directed through twin cyclones in series with a baghouse (ARM 17.8.749 and 40 CFR 52.21).
17. The lime hydrator shall be vented through a wet scrubber (ARM 17.8.752).
 - a. Graymont shall install, calibrate, maintain, and operate monitoring devices for the measurement of the following (ARM 17.8.749):
 - i. Pressure drop of the gas stream across the lime hydrator. The monitoring device must be certified by the manufacturer to be accurate to within ± 500 pascals (± 2 inches of water).
 - ii. Lime hydrator scrubbing liquid flow rate. The monitoring device must be certified by the manufacturer to be accurate within $\pm 5\%$ of the design liquid flow rate and must be calibrated at least annually in accordance with the manufacturer's instructions.
 - b. Graymont shall record measurements from the devices listed in Section II.A.17.a.i and ii

during the performance of all compliance tests and at least once per shift while the system is in operation (ARM 17.8.749).

- c. The lime hydrator shall be limited to a maximum production of 111,000 tons of lime hydrate produced during any rolling 12-month period (ARM 17.8.749).
18. The surge bin emissions shall be controlled by a bin vent fabric filter.
19. The bucket conveyor, oversize pulverizer, and hydrate storage silo shall be controlled by a baghouse.
20. The hydrated lime truck loadout shall be controlled by a filter module.
21. At all times, Graymont shall maintain and operate each facility in a manner consistent with good air pollution control practice. The qualities of operating and maintenance procedures will be evaluated on evidence available to Department, including, but not necessarily limited to, monitoring results, review of procedures, and inspection of the facility (40 CFR 52.21).
22. Graymont shall provide a partial enclosure of the lime kiln dust silo (T-89) and surge bin loadout area (N-280) by installing wind guards on the sides of the silo and surge bin (ARM 17.8.749).
23. Graymont shall unload from the lime kiln dust silo (T-89) and the surge bin (N-280) to the trucks using a telescopic system that has partial air return through a baghouse (ARM 17.8.749).
24. All trucks hauling lime kiln dust must be covered (ARM 17.8.749).
25. Graymont shall provide for water to be applied at the storage site when it is necessary to meet the reasonable precaution requirements of ARM 17.8.308(1) (ARM 17.8.749).
26. The lime kiln dust that is sold off site shall be loaded into covered trucks for transport (ARM 17.8.752).
27. Graymont shall process no more than 215,000 tons of limestone in the limestone processing screen and conveyors (S2, C6, C7, and C9) during any rolling 12-month period (ARM 17.8.749).
28. The speed of the 900-hp AC motor on Lime Kiln #1 and Lime Kiln #2 shall each be limited to a maximum of 1750 RPM (ARM 17.8.749).

B. Emission Limitations

1. Graymont shall not cause or authorize to be discharged into the atmosphere from each rotary lime kiln (i.e., Kiln #1 or Kiln #2) any stack emissions that:
 - a. Contain particulate matter in excess of 0.50 pounds per ton (lb/ton) of limestone feed (ARM 17.8.752).
 - b. Exhibit greater than 15% opacity (ARM 17.8.340, 40 CFR Part 60, Subpart HH).
 - c. Contain NO_x emissions in excess of 100 pounds per hour (lb/hr) (ARM 17.8.819).
 - d. Contain SO₂ emissions in excess of 63.5 lb/hr (ARM 17.8.819).
 - e. Contain CO emissions in excess of 131.0 lb/hr (ARM 17.8.819).
 - f. Contain VOC emissions in excess of 1.25 lb/hr (ARM 17.8.752).

- g. Do not comply with ARM 17.8.322(6)(c).
2. Graymont shall not cause or authorize to be discharged into the atmosphere from the lime hydrator, any emissions that:
 - a. Contain particulate matter in excess of 3.0 lb/hr (ARM 17.8.752).
 - b. Exhibit greater than 15% opacity (ARM 17.8.752).
 3. Graymont shall not cause or authorize to be discharged into the atmosphere from the lime handling bin vent (controlling the surge bin (N401)); the product handling dust collector (controlling the bucket conveyor, oversize pulverizer, and hydrate storage silo); or the truck loading filter Module (controlling the hydrated lime truck loadout), any emissions that:
 - a. Contain particulate matter in excess of 0.020 grains per dry standard cubic foot (gr/dscf) (ARM 17.8.752).
 - b. Exhibit greater than 15% opacity (ARM 17.8.752).
 4. Graymont is authorized to burn coke, coal, and/or syncoal in the #1 Lime Kiln and the #2 Lime Kiln (ARM 17.8.749).
 5. Petroleum coke shall not be burned in either Kiln #1 or Kiln #2 until the kilns are processing limestone (ARM 17.8.749).
 6. Graymont shall not cause or authorize to be discharged into the atmosphere from any source at the facility, visible emissions that exhibit an opacity of 20% or greater, unless specified elsewhere in this permit (ARM 17.8.304 and ARM 17.8.752).
 7. Graymont shall not cause or authorize to be discharged into the atmosphere any visible fugitive emissions from haul roads, access roads, parking lots, and the truck turn-around loop at both the plant and the rail loadout facility, that exhibit an opacity of 20% or greater (ARM 17.8.308).
 8. Graymont shall not cause or authorize to be discharged into the atmosphere visible emissions that exhibit an opacity of 20% or greater from truck dumping of any material into feed hoppers, from screening operations, from conveying, from crushers, or from the handling of lime kiln baghouse dust (ARM 17.8.308).
 9. Particulate emissions from the lime baghouse (Micropul, Model 365-10-30) shall be limited to 0.0027 lb/ton of lime shipped.
 10. Particulate emissions from the coal baghouse (Micropul, Model 8-B, 400 actual cubic feet per minute (acfm) air flow capacity) shall be limited to 0.0001lb/ton coal fired.
 11. Graymont shall not cause or authorize to be discharged into the atmosphere from any transfer on a belt conveyor used in a nonmetallic mineral processing plant that was constructed, reconstructed, or modified after August 31, 1983, including, but not limited to, conveyors C213, C214, and C215, any fugitive emissions that exhibit greater than 10% opacity (ARM 17.8.752, 17.8.340 and 40 CFR Part 60, Subpart OOO).
 12. Graymont shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements contained in 40 CFR Part 60 as described below (ARM 17.8.752, ARM 17.8.340 and 40 CFR Part 60):
 - a. Subpart OOO as it applies to C213, C214, C215, and any other affected facilities to which Subpart OOO is applicable.

- b. Subpart Y as it applies to the lump breaker, the coal hopper, and any coal conveying equipment constructed, reconstructed, or modified after October 24, 1974.
- c. Subpart HH as it applies to the rotary Lime Kilns #1 and #2.

C. Emission Testing

1. Graymont shall conduct source tests on each rotary lime kiln for NO_x, SO₂, and CO, concurrently, and demonstrate compliance with the emission limitations contained in Section II.B.1.c through e. Testing and compliance demonstrations for both rotary lime kilns shall occur on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department. After three tests have been performed, Graymont may request the testing frequency be reviewed for possible revision (ARM 17.8.105 and ARM 17.8.749).

For the 30-day period prior to submitting the pre-test protocol for the above tests, Graymont shall record the following operating parameters on an hourly basis. These hourly readings, along with the daily and 30-day averages, shall be submitted with the pre-test protocol. The facility shall be operated in a manner consistent with these operating parameters during the source test. If both kilns are tested concurrently, data collected from either kiln will be sufficient.

- a. Percent combustibles at kiln outlet
- b. Percent oxygen at kiln outlet
- c. Lime production rate
- d. Coal combustion rate
- e. Coke combustion rate
- f. Preheater outlet temperature
- g. Upper lime temperature
- h. Hot zone temperature
- i. Feed End Temperature

Graymont shall also record the above parameters, on an hourly basis, during performance of the source test and submit this information in the source test report.

2. Graymont shall conduct source tests for particulate on both lime kilns, and demonstrate compliance with the limitations in Section II.B.1.a. The testing and compliance demonstration shall occur on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department. These tests shall include determination of total mass particulate and PM-10 (ARM 17.8.105 and ARM 17.8.749).
3. Graymont shall conduct initial opacity tests on any conveyor constructed, reconstructed, or modified after August 31, 1983, including, but not limited to, conveyors C213, C214, and C215 (ARM 17.8.340 and 40 CFR Part 60, Subpart OOO).
4. Graymont shall conduct initial opacity tests on any 40 CFR Part 60, Subpart Y affected facility which includes, but is not limited to the lump breaker, the coal hopper, or any coal conveyor constructed, reconstructed, or modified after October 24, 1974 (ARM 17.8.340 and 40 CFR, Part 60, Subpart Y).
5. All source tests shall be conducted in accordance with the applicable test methods listed in 40 CFR Part 60, Appendix A, Subpart HH, Subpart OOO, 40 CFR Part 51, and the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
6. The Department may require further testing (ARM 17.8.105)

D. Continuous Emission Monitoring Systems (CEMS)

1. Graymont shall calibrate, maintain, and operate CEMS to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from each rotary lime kiln.
 - a. The span of these systems shall be set at 40% opacity.
 - b. The opacity CEMS shall conform to all requirements of 40 CFR Part 60, Appendix B, Performance Specification 1 - Specifications and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources (PS1).
 - c. Graymont performed the initial performance specification tests required in PS1 on the opacity CEMS on the second lime kiln October 27, 1992, and submitted the report to the Department on November 25, 1992.
 - d. The opacity CEMS data will be used to demonstrate compliance with the 15% opacity limitation (Condition II.B.1.b). Graymont shall maintain, at a minimum, compliance with the 15% opacity limitation, as demonstrated by the CEMS, 95% of the time the CEMS is operating.
 - e. When either CEMS is not operating for a period of greater than 24 hours, Graymont shall monitor visible emissions from the lime kiln stack at least once per day using a certified visible emission observer who will perform visible emission observations and record the results. These observations shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 9 and the Montana Visible Emissions Field Documentation Form. These observations shall occur during normal operation of the lime kiln and shall consist of three 6-minute averages.
2. Graymont shall submit a written report of all excess emissions quarterly. Periods of excess emissions shall be defined as those averaged over a 6-minute period for which the average is greater than 15%. The report shall be in the format contained in Attachment 2 and include, at a minimum, the following:
 - a. The magnitude of excess emissions and the date and time of commencement and completion of each time period of excess emissions.
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.
 - c. The date and time identifying each period during which the opacity CEMS was inoperative, except for zero and span checks. The nature of the system repairs or adjustments must also be reported.
 - d. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - e. The percentage of time the opacity CEMS was operating. This shall be calculated as:
 - 1- (hours of opacity CEMS downtime during reporting period/hours the source operated during the reporting period) x 100

This shall be reported as percent monitor availability during plant operation. Graymont shall maintain a minimum of 90% monitor availability during plant operation and shall meet the minimum frequency for operation required in 40 CFR 60.13(e).

- f. The percentage of time the opacity CEMS indicated compliance. This shall be calculated as:

1- (total hours of excess emissions during the reporting period/total hours of CEMS availability during the reporting period) x 100

This shall be reported as percent compliance. Graymont shall maintain, as a minimum, compliance with the 15% lime kiln opacity limitation, as demonstrated by the CEMS, 95% of the time the CEMS is operating.

- g. The excess emission reports shall be submitted within 30 days following the end of the reporting period (January-March, April-June, July-September, and October-December).

3. Graymont shall inspect and audit the opacity CEMS annually, using neutral density filters. Graymont shall conduct these audits using the appropriate procedures and forms in the EPA Technical Assistance Document: Performance Audit Procedures for Opacity Monitors (EPA-450/4-92-010, April 1992). The results of these inspections and audits shall be included in the quarterly excess emission report.
4. Graymont shall implement the standard operating procedures manuals and quality assurance plans for the opacity CEMS. These documents have been submitted to the Department.
5. Graymont shall install, calibrate, maintain, and operate devices for measuring the mass rate of lime produced from the rotary lime kilns. The measuring devices must be accurate to within $\pm 5\%$ of the mass rate over its operating range. This measuring device may be used in determining compliance with the condition in Section II.B.1.a and 40 CFR 60.342 (ARM 17.8.749 and 40 CFR 52.21). The devices are only required to be operational during a stack test to evaluate compliance with Section II.B.1.a.
6. Graymont shall maintain a file of all measurements from the opacity CEMS, lime production monitoring devices (during kiln stack testing only), and performance testing measurements; all opacity CEMS performance evaluations; all opacity CEMS or monitoring device calibration checks and audits; adjustments and maintenance performed on these systems or devices, recorded in a permanent form suitable for inspection. The file shall be retained on site for at least 5 years following the date of such measurements and reports. Graymont shall supply these records to the Department upon request.

E. Ambient Monitoring

Graymont shall conduct ambient air monitoring if required by the Department (ARM 17.8.105).

F. Operational Reporting Requirements

1. Graymont shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis, sources identified in Section I of the permit analysis, and the sources identified in this section.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department.

The production information is required for the annual emission inventory and to verify compliance with permit conditions. The information supplied shall include, but is not limited to, the following (ARM 17.8.505):

- a. Number of holes drilled.
- b. Number of blasts.
- c. Type and tons of explosives used in blasting (ANFO).
- d. Acres of disturbed area and percent exposed.
- e. Tons of limestone removed.
- f. Tons of waste rock removed.
- g. Hours of operation of limestone and waste removal.
- h. Tons through primary crusher.
- i. Hours of operation of primary crusher.
- j. Tons of limestone processed through Kiln #1.
- k. Tons of limestone processed through Kiln #2.
- l. Hours of operation of each kiln.
- m. Tons of coal burned in Kiln #1.
- n. Tons of Syncoal burned in Kiln #1.
- o. Tons of coal burned in Kiln #2.
- p. Tons of Syncoal burned in Kiln #2.
- q. Total tons of coal unloaded.
- r. Gallons of diesel used in Kiln #1.
- s. Gallons of diesel used in Kiln #2.
- t. Tons of lime produced.
- u. Tons of petroleum coke burned in Kiln #1.
- v. Tons of petroleum coke burned in Kiln #2.
- w. Tons of limestone processed in the limestone processing equipment.
- x. Vehicle miles traveled on haul roads, type of vehicle category, and percent paved.
- y. Vehicle miles traveled on access roads, type of vehicle category, and percent paved.
- z. Gallons of diesel used in vehicles.
- aa. Fugitive dust information consisting of a listing of all plant vehicles, including:
 - i. Vehicle type,
 - ii. Vehicle weight,
 - iii. Number of tires on vehicle,
 - iv. Average trip length,
 - v. Number of trips per day,
 - vi. Average vehicle speed,
 - vii. Area of activity, and
 - viii. Vehicle fuel usage (gasoline or diesel) - annual total.

If the information on vehicle size has not changed over the past year, Graymont only needs to supply the vehicle type and the vehicle miles traveled (VMT) by each vehicle type, as required in this section. If changes occur, Graymont shall supply the information in this section for the changed vehicles.

- bb. Application schedule for water or chemical dust suppressant, if any.
 - cc. Tons of calcium hydroxide (hydrated lime) produced.
 - dd. Hours of operation of the lime hydrator.
2. Graymont shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the

Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. Graymont shall document, by month, the lime hydrator production. By the 25th day of each month, Graymont shall total the hydrated lime produced during the previous 12 months to verify compliance with the limitation in Section II.A.17.d. A written report of the compliance verification shall be submitted to the Department annually. The report for the previous calendar year shall be submitted no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).
4. Graymont shall document, by month, the amount of limestone processed in the limestone processing equipment. By the 25th day of each month, Graymont shall total the monthly amounts of limestone processed during the previous 12 months to verify compliance with the limitation in Section II.A.27. A written report of the compliance verification shall be submitted to the Department annually. The report for the previous calendar year shall be submitted no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).

G. Notification

Graymont shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.749, ARM 17.8.340, and 40 CFR Part 60 General Provisions):

1. Commencement of construction of the limestone processing equipment within 30 days after commencement of construction.
2. Actual start-up date of the limestone processing equipment within 15 days after the actual start up.
3. CEMS performance tests at least 30 days prior to the scheduled CEMS performance tests.
4. All source tests as required by the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

H. Recordkeeping

1. Graymont shall record the speed of the 900-horsepower (hp) AC fan motor on Lime Kiln #1 and Lime Kiln #2 daily. The record must be available for inspection by the Department and must be submitted to the Department upon request (ARM 17.8.749).
2. All records compiled in accordance with this permit must be maintained by Graymont as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

Section III: General Conditions

- A. Inspection - The recipient shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if the recipient fails to appeal, as indicated below.

- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving the permittee of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).
- D. Enforcement - Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401 *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay by the permittee of an annual operation fee may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

ATTACHMENT 1

AMBIENT MONITORING PLAN GRAYMONT WESTERN U.S., INC. Permit #1554-16

1. Graymont Western U.S., Inc. (Graymont) has operated particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) monitor(s) at their facility for several years. The monitor(s) have shown relatively low readings for the last 5 years. Therefore, in accordance with an October 9, 1998, guidance document developed by the Department of Environmental Quality (Department), Graymont can discontinue operation of their PM₁₀ ambient monitors.
2. The Department may require Graymont to conduct additional ambient monitoring, if necessary.

ATTACHMENT 2

INSTRUCTIONS FOR COMPLETING EXCESS EMISSION REPORTS

PART 1 Complete as shown. Report total time during the reporting period in hours. The determination of plant operating time (in hours) includes time during unit start up, shut down, malfunctions, or whenever pollutants of any magnitude are generated, regardless of unit condition or operating load.

Excess emissions include all time periods when emissions, as measured by the CEMS, exceed any applicable emission standard for any applicable time period.

Percent of time in compliance is to be determined as:

$$\left(1 - \frac{(\text{total hours of excess emissions during reporting period})}{(\text{total hours of CEMS availability during reporting period})} \right) \times 100$$

PART 2 Complete as shown. Report total time the point source operated during the reporting period in hours. The determination of point source operating time includes time during unit start up, shut down, malfunctions, or whenever pollutants (of any magnitude) are generated, regardless of unit condition or operating load.

Percent of time CEMS was available during point source operation is to be determined as:

$$\left(1 - \frac{(\text{CEMS downtime in hours during reporting period}^*)}{(\text{total hours of point source operation during reporting period})} \right) \times 100$$

* All time required for calibration and to perform preventative maintenance must be included in the opacity CEMS downtime.

PART 3 Complete a separate sheet for each pollutant control device. Be specific when identifying control equipment operating parameters. For example: number of TR units, energized for ESPs; pressure drop and effluent temperature for baghouses; and bypass flows and pH levels for scrubbers. For the initial EER, include a diagram or schematic for each piece of control equipment.

PART 4 Use Table I as a guideline to report all excess emissions. Complete a separate sheet for each monitor. Sequential numbering of each excess emission is recommended. For each excess emission, indicate: 1) time and duration, 2) nature and cause, and 3) action taken to correct the condition of excess emissions. Do not use computer reason codes for corrective actions or nature and cause; rather, be specific in the explanation. If no excess emissions occur during the quarter, it must be so stated.

PART 5 Use Table II as a guideline to report all CEM system upsets or malfunctions. Complete a separate sheet for each monitor. List the time, duration, nature and extent of problems, as well as the action taken to return the CEM system to proper operation. Do not use reason codes for nature, extent or corrective actions. Include normal calibrations and maintenance as prescribed by the monitor manufacturer. Do not include zero and span checks.

PART 6 Complete a separate sheet for each pollutant control device. Use Table III as a guideline to report operating status of control equipment during the excess emission. Follow the number sequence as recommended for excess emissions reporting. Report operating parameters consistent with Part 3, Subpart e.

PART 7 Complete a separate sheet for each monitor. Use Table IV as a guideline to summarize excess emissions and monitor availability.

PART 8 Have the person in charge of the overall system and reporting certify the validity of the report by signing in Part 8.

EXCESS EMISSIONS REPORT

PART 1

- a. Emission Reporting Period _____
- b. Report Date _____
- c. Person Completing Report _____
- d. Plant Name _____
- e. Plant Location _____
- f. Person Responsible for Review
and Integrity of Report _____
- g. Mailing Address for 1.f. _____

- h. Phone Number of 1.f. _____
- i. Total Time in Reporting Period _____
- j. Total Time Plant Operated During Quarter _____
- k. Permitted Allowable Emission Rates: Opacity _____
SO₂ _____ NO_x _____ TRS _____
- l. Percent of Time Out of Compliance: Opacity _____
SO₂ _____ NO_x _____ TRS _____
- m. Amount of Product Produced
During Reporting Period _____
- n. Amount of Fuel Used During Reporting Period _____

PART 2 - Monitor Information: Complete for each monitor.

a. Monitor Type (circle one)

Opacity SO₂ NO_x O₂ CO₂ TRS Flow

b. Manufacturer _____

c. Model No. _____ d. Serial No. _____

e. Automatic Calibration Value: Zero _____ Span _____

f. Date of Last Monitor Performance Test _____

g. Percent of Time Monitor Available:

- 1) During reporting period _____
2) During plant operation _____

h. Monitor Repairs or Replaced Components Which Affected or Altered Calibration Values _____

i. Conversion Factor (f-Factor, etc.)

j. Location of monitor (e.g. control equipment outlet)

PART 3 - Parameter Monitor of Process and Control Equipment. (Complete one sheet for each pollutant.)

a. Pollutant (circle one):

Opacity SO₂ NO_x TRS

b. Type of Control Equipment _____

c. Control Equipment Operating Parameters (i.e., delta P, scrubber water flow rate, primary and secondary amps, spark rate)

d. Date of Control Equipment Performance Test _____

e. Control Equipment Operating Parameter During Performance Test

PART 4 - Excess Emission (by Pollutant)

Use Table I: Complete table as per instructions. Complete one sheet for each monitor.

PART 5 - Continuous Monitoring System Operation Failures

Use Table II: Complete table as per instructions. Complete one sheet for each monitor.

PART 6 - Control Equipment Operation During Excess Emissions

Use Table III: Complete as per instructions. Complete one sheet for each pollutant control device.

Part 7 - Excess Emissions and CEMS performance Summary Report

Use Table IV: Complete one sheet for each monitor.

PART 8 - Certification for Report Integrity, by person in 1.f.

THIS IS TO CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE INFORMATION PROVIDED IN THE ABOVE REPORT IS COMPLETE AND ACCURATE.

SIGNATURE _____

NAME _____

TITLE _____

DATE _____

TABLE I
EXCESS EMISSIONS

<u>Date</u>	<u>Time</u>		<u>Duration</u>	<u>Magnitude</u>	<u>Explanation/ Corrective Action</u>
	<u>From</u>	<u>To</u>			

TABLE II
CONTINUOUS MONITORING SYSTEM OPERATION FAILURES

<u>Date</u>	Time			<u>Problem/ Corrective Action</u>
	<u>From</u>	<u>To</u>	<u>Duration</u>	

TABLE III
CONTROL EQUIPMENT OPERATION DURING EXCESS EMISSIONS

<u>Date</u>	<u>Time</u> <u>From To Duration</u>	<u>Operating</u> <u>Parameters</u>	<u>Corrective Action</u>
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TABLE IV

Excess Emission and CEMS Performance Summary Report

Pollutant (circle one): SO₂ NO_x TRS H₂S CO Opacity

Monitor ID

Emission data summary ¹	CEMS performance summary ¹
<p>1. Duration of excess emissions in reporting period due to:</p> <p>a. Startup/shutdown b. Control equipment problems c. Process problems d. Other known causes e. Unknown causes</p> <p>2. Total duration of excess emissions</p> <p>3. $\left[\frac{\text{Total duration of excess emissions}}{\text{Total time CEM operated}} \right] \times 100 =$</p>	<p>1. CEMS² downtime in reporting due to:</p> <p>a. Monitor equipment malfunctions b. Non-monitor equipment malfunctions c. Quality assurance calibration d. Other known causes e. Unknown causes</p> <p>2. Total CEMS downtime</p> <p>3. $\left[\frac{\text{Total CEMS downtime}}{\text{Total time source emitted}} \right] \times 100 =$</p>

¹ For opacity, record all times in minutes. For gases, record all times in hours. Fractions are acceptable (e.g., 4.06 hours)

² CEMS downtime shall be regarded as any time CEMS is not measuring emissions.

Permit Analysis
Graymont Western U.S., Inc.
Permit #1554-16

I. Introduction/Process Description

A. Permitted Equipment

Graymont Western U.S. Inc.'s (Graymont) existing limestone quarry, lime manufacturing plant, and proposed additions are located in Broadwater County, Montana, approximately 4.5 miles west of Townsend on Indian Creek Road. The quarry is located in Section 33, Township 7 North, Range 1 East, and the lime manufacturing facility is located in Section 28, Township 7 North, Range 1 East. A railroad loadout facility is located 1 mile north of Townsend in Section 25, Township 7 North, Range 1 East. The nearest New Source Review – Prevention of Significant Deterioration (PSD) Class I area is the Gates of the Mountains Wilderness, approximately 28 miles north of Graymont's existing Indian Creek plant. Graymont is approximately 130 kilometers from Yellowstone National Park. A more detailed site description is contained in Permit Application #1554A-2.

Graymont's facility consists of the following equipment:

1. Quarry/Crusher

- a. Hewitt-Robins 52" x 16' style VL-9 vibrating stone feeder with grizzly and 30-horsepower (hp) motor
- b. Hewitt-Robins #4866 impact crusher with single rotor and 300-hp motor
- c. Hewitt-Robins 8' x 20' three-deck screen with 40-hp motor
- d. Conveying system: crusher to reject pile
- e. Conveying system: crusher to radial stacker
- f. Baghouse to collect emissions from the crusher operation and truck unloading

2. Lime Process Plant

- a. Two 11-ram preheaters with 26' diameters.
- b. Kiln #1 - 12' diameter x 150' length - refractory lined, powered by a 100-hp motor. Includes I.D. fan powered by a 900-hp motor.
- c. Kiln #2 - 12' diameter x 150' length - refractory lined, powered by a 150-hp motor. Includes I.D. fan powered by a 900-hp motor.
- d. Two contact coolers 9' 9" square with 150-hp cooling fans and four vibrating lime discharge feeders.
- e. Two Raymond bowl coal mills (#553A) with 150-hp motors.
- f. Two 6'-diameter cyclones (62,000 actual cubic feet per minute (acfm) at 580°F) at the end of each of the two kilns (total of 4 cyclones). The discharge passes to the baghouses described below.
- g. Micropul Model 360STRH-10-20 baghouse, 75,000 acfm at 470°F with approximately 17,000 square feet (ft²) and an air-to-cloth ratio of 4.4:1. The baghouse is used for kiln emission exhaust.
- h. Aeropulse baghouse, model #4-PR-340-10-H-WP-Y, with 75,000 acfm at 470°F with approximately 17,000 ft² and an air-to-cloth ratio of 4.4:1. The baghouse is used for kiln emission exhaust.

- i. Micropul baghouse, model 144 STD-10, for lime plant housekeeping with a nominal flow rate of 10,000 acfm, 1696 ft² of filter area and an air-to-cloth ratio of 5.9:1.
 - j. Aeropulse baghouse, model #PR-225-10-H-N, for lime plant housekeeping with a nominal flow rate of 15,000 acfm, 2723 ft² of filter area, and an air-to-cloth ratio of 5.5:1.
 - k. Coal Silo
 - l. Micropul baghouse, model No. 8-B, for coal loading into the #1 coal silo (T-90), 400 acfm with 84 ft², and an air-to-cloth ratio of 4.7:1.
 - m. Baghouse to collect emissions from the stone dressing screens and conveying.
 - n. Twenty-ton capacity surge bin (N1100) with a bin vent fabric filter manufactured by Aeropulse, Model SB-16-10-N, 620-acfm capacity.
 - o. Premixer.
 - p. Lime hydrator manufactured by Cimprogetti, Model CIM-HYDRAX, size 800 (or equivalent). Particulate emissions are controlled by use of a wet scrubber, which is an integral part of the hydrator. The capacity of the hydrator is 15 tons of lime hydrate per hour.
 - q. Bucket conveyor, oversize pulverizer and hydrate storage silo controlled with a 6,000-cfm baghouse manufactured by Aeropulse, Model PR-90-10-H-Y.
 - r. Hydrated lime truck loadout consisting of a screw/bucket elevator that discharges to a spout controlled by a 1,000-cfm filter module manufactured by DCL, Model FS-140 (or equivalent).
 - s. Limestone processing equipment consisting of a screen (S2) and three new conveyors (C6, C7, and C9).
 - t. Syncoal silo (T-290) and conveyor.
 - u. Micropul baghouse, model #16 S 10-20B, for loading into the coal/coke/syncoal silo (T-290); 1000 acfm with a cloth area of 188 ft² and an air-to-cloth ratio of 1:5.3.
 - v. Kiln Dust Silo
 - w. Micropul baghouse, model #36 S 10-30B; 2000 acfm with a cloth area of 455 ft² and an air-to-cloth ratio of 1:4.4.
3. Auxiliary Equipment
- a. Front-end loaders, trucks, graders, scrapers, dozers, mobile power facilities, storage and housing, etc.
 - b. Roll crusher (200 ton per hour (tph)), rotary valve, slide gates (4), screw conveyors (2), and weigh feeders (2) for use in the fuel blending facility.
 - c. Coke/coal blending system consisting of a lump breaker, two hoppers, and

conveying equipment.

- d. Aeropulse baghouse, model #SB-9-10, on South #1 Kiln Cyclone Silo/Bin for lime kiln dust unloading; 900 acfm with a cloth area of 108 ft² and an air-to-cloth ratio of 1:8.3.
- e. Two portable coal conveyors for coal transfer from trucks to stockpile.

B. Process Description

The primary raw material for the lime manufacturing process is limestone. The limestone for this plant is obtained from the quarry, located about 1 mile south of the plant area.

The process of obtaining limestone first begins with drilling and blasting. The blasted limestone is loaded into trucks using a front-end loader. The broken material is transported by truck to a hopper and from there it is crushed and screened. The screened limestone is then conveyed to storage piles using a long conveying system. From the storage piles, the limestone passes over a screen, and is then conveyed into the two kiln preheaters.

The preheater, located above the kiln, is used to preheat the limestone and to control the feed rate to the kiln. The stone that is added to the kiln is subject to heat and a gentle tumbling action.

As the limestone "falls" down through the kiln, the temperature increases as it gets closer to the flame. This heating action converts the limestone (CaCO₃) to lime (CaO) and carbon dioxide (CO₂).

Once the lime reaches the end of the kiln, it is cooled and crushed to its final size. The lime is conveyed to one of several possible lime storage silos. Some of the lime will be processed through the lime hydrator to produce hydrated lime. The product lime is then loaded into trucks for transport to various markets.

The product lime is loaded into standard over-the-road covered trucks. These trucks are able to haul approximately 35 tons of lime. The loading occurs at the new and existing lime loadout facilities. The trucks proceed down an unpaved road until they reach Highway 12 and/or the railroad loadout facility. The rail loadout facility is located about 150 meters from the highway. The unpaved road is watered and treated with chemical suppressant (usually MgCl₂).

C. Permit History

The original air quality **Permit #1554** was issued to Continental Lime for a limestone quarry and lime manufacturing facility by the Montana Department of Health and Environmental Sciences on June 15, 1981.

On August 27, 1982, the United States Environmental Protection Agency (EPA) Region VIII issued a permit to Continental Lime under the requirements of 40 CFR 52.21, Prevention of Significant Deterioration of Air Quality. The permit was for the construction and operation of the lime manufacturing facility, including the #1 Lime Kiln.

The first change was given **Permit #1554A** and was modified on May 1, 1985, to update the permit to comply with the applicable New Source Performance Standards and to remove the ambient monitoring requirement.

The second change was given **Permit #1554A-2** and was issued April 13, 1990. Continental Lime submitted their application on January 10, 1990, for an alteration of their permit. The alteration consisted of the addition of a second rotary lime kiln capable of producing 500 tons per day of CaO. The application also included the necessary ancillary equipment to support the kiln, such as lime handling, lime loadout, and coal handling systems. The operating capacity of the existing quarry, crusher, and conveying systems was sufficient to handle the increase in lime production with only an

increase in operating hours. The maximum rated capacity of the crusher is estimated at 1,481,331 tons per year.

The alteration was a "major modification" according to the PSD rules. Therefore, Continental Lime was required to meet the PSD permitting requirements. The PSD rules required submittal of 1 year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) premonitoring data.

Continental Lime submitted 4 months of PM₁₀ monitoring data and requested that the Air Quality Division (AQD) accept this amount of monitoring data as adequate. Continental Lime submitted a statistical analysis of previously submitted particulate matter (PM) data and demonstrated to the satisfaction of the AQD that the 4 months of PM₁₀ data would provide a complete and adequate analysis. The permit application, Permit #1554A-2, was deemed complete on February 12, 1990.

The third change was given **Permit #1554-03** and was issued on July 16, 1993. The modification was requested to allow Continental Lime an opportunity to conduct temporary burning of coke and coal mixtures in the two kilns at the Indian Creek plant.

During the temporary burning of coke and coal mixtures, Continental Lime was required to meet their existing permit conditions, as well as additional reporting and recordkeeping requirements outlined in Section II.G. of the permit modification.

During all temporary burning, Continental Lime was required to maintain compliance with the sulfur-in-fuel rule. The temporary burning was allowed for 18 weeks and had to be completed no later than December 3, 1993. Continental Lime was required to submit a permit application to request any permanent change for the burning of coke.

The fourth change to the permit, given **Permit #1554-04**, was issued on August 27, 1993, for the construction and installation of a lime hydrator at the Indian Creek plant. The hydrator will convert quicklime to hydrated lime. The lime hydrator is located at the product end of the plant. The hydrator process takes lime (as calcium oxide) and adds water and/or steam to form calcium hydroxide or hydrated lime.

The lime hydrator would operate at full production only when the demand for hydrated lime is great enough. The demand was expected to be greatest from June through September. During this seasonal period, production was expected to be up to 24 hours per day, 7 days per week. During the nonseasonal market periods, operation was expected to be one shift, 5 days per week.

The lime hydrator was designed to produce 15 tons per hour of hydrated lime. The lime hydrator would be controlled by a wet scrubber to control product losses and keep the process under negative pressure. The process uses the spent scrubbing liquid for its water feed; therefore, no sludge handling or removal was required. The handling of quicklime and hydrated lime was controlled using bin vent fabric filter dust collectors.

Continental Lime submitted another permit application on April 15, 1994, for the addition of an oxides of nitrogen (NO_x) limit for the #2 Kiln. The application was given **Permit #1554-05**. This application was withdrawn by the company and, therefore, Permit #1554-05 was not issued.

Permit Alteration #1554-06 was issued on March 20, 1996, to do the following:

1. Increase the allowable sulfur limit for the coal used to fire the kilns. The sulfur limit was increased from the previously allowable 0.6% by weight to 1.0 pound per million British thermal unit (lb/MMBtu). This allowed Continental Lime greater flexibility in selecting coal suppliers.
2. Allow Continental Lime to use syncoal to fire the kilns.
3. Establish emission limits for NO_x, sulfur dioxide (SO₂), and carbon monoxide (CO) for the #2

Lime Kiln.

4. Increase the SO₂ emission limits for the #1 Lime Kiln. The permit also increased the CO limit and decreased the NO_x limit for the #1 Lime Kiln to be consistent with the limits for the #2 Lime Kiln. The changes in the CO and NO_x limits were based on the Best Available Control Technology (BACT) analysis and determination and stack tests at the facility. The increase in the SO₂ limit was based on the increased allowable sulfur-in-fuel.
5. This permitting action also changed the units of the particulate emission limit for the lime hydrator in Section II.B.8.a of Permit #1554-05 from pounds per ton (lb/ton) of lime hydrate to pounds per hour (lb/hr). The new particulate limit (1.5 lb/hr) was derived by multiplying the old emission limit of 0.10 lb/ton of lime hydrate by the production capacity of 15 tons of lime hydrate per hour.

The net increases of NO_x, SO₂, and CO were greater than the PSD significance levels, and the permit was subject to the requirements of the PSD program. This application fulfilled the PSD review requirements for both lime kilns and, therefore, the permit replaced EPA's PSD permit, which was issued for the #1 Lime Kiln on August 27, 1982, as well as the state Permit #1554-04.

A detailed description of this permitting action is contained in the analysis of Permit #1554-06.

On April 22, 1996, Continental Lime submitted a complete application for **Permit #1554-07** to increase the particulate emission limit for the lime hydrator at the facility. The unit's design incorporates a wet scrubber, which was not able to perform as well as originally expected. Continental Lime proposed that the emission limit be increased from 1.5 lb/hr to 3.0 lb/hr. The proposal would increase the allowable PM₁₀ emissions from the facility by 4.2 tons/year. This permit also authorized the extension of the hydrator stack to 94 feet. Modeling performed on the hydrator emissions had shown there would not be a significant impact on the local air quality.

Because the hydrator had not yet been tested to demonstrate compliance with the particulate emission limits established during the original permitting action (Permit #1554-04), emission changes authorized by this action must be considered part of the original permitting action to determine PSD applicability. If permitted for unlimited hours of operation, the Potential to Emit (PTE) of the hydrator facility would exceed the PSD significant level of 15 tons/year of PM₁₀. This permitting action established a limit of 7400 hours of operation per year on the lime hydrator. This limit would bring the PTE for the entire hydrator unit to less than 15 tons/year of PM₁₀ and the hydrator would not be subject to the requirements of the PSD program.

On March 23, 1997, Continental Lime was issued **Permit #1554-08**, which was a modification of their existing permit to allow for a test burn using petroleum coke at the facility. This allowed Continental Lime to conduct the test burn using 744 tons of petroleum coke. The test burn had to be completed by October 1, 1997. The emissions from this test burn did not exceed 15 tons of SO₂; therefore, this test burn was completed in accordance with the Administrative Rules of Montana (ARM) 17.8.705(1)(q). However, as described in ARM 17.8.733(1)(c), the permit did need to be modified to allow the temporary burning of the petroleum coke. Continental Lime was still required to comply with their existing SO₂ emission limitation and with the sulfur-in-fuel requirements contained in ARM 17.8.322(6)(c). Some of the equipment installed as a result of this test burn was a coke lump breaker and some conveying equipment. This equipment was retained by the facility to be used when the permanent use of coke is approved.

On June 20, 1997, Continental Lime was issued **Permit #1554-09** to use petroleum coke as fuel for the kilns at the plant. This resulted in a significant increase in the allowable SO₂ emissions from the kilns. The significant increase in SO₂ required that a PSD review be conducted for SO₂ by the Department of Environmental Quality (Department) for this permit. There was also a slight increase in the amount of PM₁₀ emissions generated from the facility from the installation of some additional fuel handling equipment for the coke fuel for this project. The increase in PM₁₀

emissions did not exceed PSD significance levels for this pollutant. Allowable emissions of NO_x and CO did not increase as a result of this permitting action.

Along with the request to use petroleum coke in the kilns, Continental Lime also proposed to install additional limestone processing equipment near the existing crusher at the limestone quarry. This limestone processing operation would allow Continental Lime to screen larger pieces of limestone as a product. This proposal was a separate project from the use of petroleum coke in the kilns, but was incorporated into this permitting action. The only emissions from the limestone processing proposal were particulate emissions. The amount of particulate emissions generated from the limestone proposal did not exceed PSD significant levels, alone, or when added to the amount of particulate emissions generated from the proposed petroleum coke project.

The proposed equipment covered by this permitting action were as follows:

1. Coke/coal blending system consisting of a lump breaker, two hoppers, and conveying equipment; and
2. Limestone processing equipment consisting of a screen (S2) and three new conveyors (C6, C7, and C9).

As part of this permitting action, the Department also updated the permit to reflect that Continental Lime completed a source test on the kilns in 1995 to demonstrate compliance with the particulate limit of 0.50 lb/ton of limestone feed. The air quality permit had required Continental Lime to install a device capable of measuring the mass rate of stone feed to the kilns. Because of the design and configuration of Continental Lime's facility, it was impossible for the measuring device to be installed prior to the kilns; however, the device was installed after the kilns to measure the amount of lime produced from the kilns. This device was used during the required source test to determine compliance with the kiln's particulate limit. The Department accepted this configuration and the corresponding permit condition had been revised to reflect the current configuration of the measuring device.

On May 9, 1997, Continental Lime requested that the Department delay the issuance of the Department Decision (DD) on Permit #1554-09 to allow for the completion of a source test on Kiln #1. This delay was not a problem because the DD would still be issued in compliance with the statutorily mandated time frames. This source test was required by Permit #1554-08 and it would have been extremely awkward to issue Permit #1554-09, because a new emission limit would be in effect while a source test was conducted to demonstrate compliance with an older emission limit. Continental Lime conducted the source test on Kiln #1 on May 13, 1997, and demonstrated compliance with the applicable NO_x, SO₂ and CO emission limits. Kiln #2 never did burn petroleum coke during the test burn; therefore, Kiln #2 was not required to be tested during the test burn. The petroleum coke test burn was completed and all references to the test burn in the permit were removed from the permit.

On September 18, 1997, the Department received a request from Continental Lime to modify Permit #1554-09. **Permit #1554-10** removed the requirement for Continental Lime to send the lime kiln dust through a pugmill prior to transportation for on-site disposal. This was necessary because the pugmill was not very effective for controlling emissions and the added water reduced the quality of the lime kiln dust so it could not be readily sold as a product. Instead of operating the pugmill, Continental Lime was required to comply with the following conditions whenever lime kiln dust was loaded into trucks. These requirements actually resulted in a decrease in emissions from more effective control of the handling of lime kiln dust while maintaining the product quality.

1. Continental Lime shall provide a partial enclosure of the lime kiln dust silo (T-89) and surge bin loadout area (N-280) by installing wind guards on the sides of the silo and surge bin.
2. Continental Lime shall unload from the lime kiln dust silo (T-89) and the surge bin (N-280) to the trucks using a telescopic system that has partial air return through an existing baghouse.

3. All trucks hauling lime kiln dust must be covered.
4. Continental Lime shall provide for water to be applied at the storage site when it is necessary to meet the reasonable precaution requirements of ARM 17.8.308(1).

Because there was not an increase in emissions, this proposal was completed according to ARM 17.8.705(1)(q). However, as described in ARM 17.8.733(1)(c), the permit did need to be modified to allow Continental Lime to replace the pugmill with the above-mentioned requirements.

On December 31, 1998, **Permit #1554-11** was issued to Continental Lime, which removed the requirement for Continental Lime to operate ambient PM-10 monitors at their facility. This action was conducted in accordance with the October 9, 1998, guideline developed by the Department and the requirements of Attachment 1 were removed from Continental Lime's permit. The ambient monitoring requirements may be reinstated in the future if the Department determines it is necessary.

This permitting action also added some miscellaneous equipment to the list of permitted equipment in the permit analysis. This included a roll crusher, conveyors, and feeders that were added for the fuel blending project. This project could have been conducted without a permit pursuant to ARM 17.8.705(1)(q); however, the equipment was being added to the permitted equipment list to avoid any future confusion over these emission sources.

On September 12, 1999, Continental Lime was issued an alteration of Permit #1554-11 to allow Continental Lime to replace the existing 700-hp DC fan motor on Kiln #1 with a 900-hp AC motor. The new motor allowed Continental Lime to increase the rotations per minute (rpm) on the fan, which allowed more air to be pulled through the system. This could have resulted in an increase in emissions. However, the new fan was limited by permit to 1750 RPM, which is the maximum RPM the existing motor could achieve. Continental Lime was required to record the fan motor RPM from their computerized system to demonstrate compliance with this condition. Because of the RPM restriction, there was not an increase in potential emissions as a result of the permitting action. **Permit #1554-12** replaced Permit #1554-11.

On August 30, 2000, Continental Lime submitted a complete permit application for the alteration of Permit #1554-12. Under the permit action, Continental Lime proposed the following changes:

- A facility name change from Continental Lime, Inc., - Indian Creek Facility, to Graymont Western U.S., Inc., - Indian Creek Facility
- Increasing the horsepower on the rotary Lime Kiln #2 I.D. fan motor from 700 hp to 900 hp and restricting the allowable rpm for the motor to 1750 rpm
- Increasing the NO_x emission limit/rate from 77.5 lb/hr to 100 lb/hr for rotary Lime Kiln #1 and rotary Lime Kiln #2

Graymont requested the increase in horsepower on the rotary Lime Kiln #2 I.D. fan motor, from 700 hp to 900 hp, for the purpose of operational flexibility and reliability of equipment. Because Graymont proposed a 1750-rpm restriction for the 900-hp rotary Lime Kiln #2 I.D. fan motor, the proposed motor change did not increase potential air flow through the kiln and thus did not increase kiln production capacity. The proposed rpm restriction is identical to the existing restriction placed on the smaller motor for rotary Lime Kiln #1.

Because the above proposed changes did not increase production capacity, the permit action did not result in a significant net increase in emissions of PM₁₀, SO₂, Volatile Organic Compounds (VOC), and CO as defined under the New Source Review (NSR) Prevention of Significant Deterioration (PSD) program. However, Graymont did propose an increase in allowable NO_x emissions from 77.5 lb/hr/kiln to 100 lb/hr/kiln. The proposed changes did increase Graymont's potential NO_x

emissions by 197.10 tons per year, resulting in a significant net emission increase.

Graymont is a major source of emissions and is located in an area considered either attainment or unclassified for NO_x. Therefore, because the proposed changes resulted in a potential NO_x emission increase of greater than 40 tons per year (PSD significance level for NO_x), the proposed changes were considered a major modification and the permit action required PSD review. In accordance with the PSD regulations, Graymont was required, among other things, to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS), the Montana Ambient Air Quality Standards (MAAQS), and the PSD NO_x increment of 2.5 micro-grams per cubic meter (ug/m³). In addition, the PSD regulations required that Graymont analyze the cumulative NO_x impact from the existing plant and surrounding sources of NO_x emissions.

Graymont demonstrated compliance with the PSD NO_x increment by modeling NO_x emission impacts for the existing plant, the proposed changes to the plant, and surrounding sources of additional NO_x emissions. The modeling exercise demonstrated, to the satisfaction of the Department, that the proposed change would not violate the NAAQS or MAAQS and did not consume the available NO_x increment.

A complete copy of the Graymont PSD application, including all applicable modeling and modeling results, is on file with the Department. **Permit #1554-13** replaced Permit #1554-12.

On January 29, 2001, the Department received a de minimis determination request from Graymont. For the purpose of improving silo ventilation, Graymont proposed the installation and operation of a second silo vent on the existing syncoal silo #T-290. Graymont proposed that particulate emissions from the proposed vent be controlled by a 1000-acfm fabric filter baghouse. However, because potential uncontrolled emissions from the proposed vent were less than the de minimis threshold of 15 ton/yr, the Department determined that the current permit action could be accomplished under the provisions of the ARM 17.8.705(1)(r). Calculations demonstrating compliance with the ARM 17.8.705(1)(r) are contained in Section III.H of the permit analysis. **Permit #1554-14** replaced Permit #1554-13.

On July 18, 2002, the Department received a complete permit modification request from Graymont. The proposed permit change involved modifying the existing lime kiln dust (LKD) unloading operations to achieve compliance with Section II.A.23. of Graymont's Preconstruction Permit #1554-14 and Section III.D.16. of Graymont's Operating Permit #OP1554-01. The existing condition required that Graymont utilize telescoping spouts with partial air return to an existing baghouse for the control of particulate emissions from LKD unloading operations at the facility. While existing LKD unloading operations did utilize telescoping spouts, Graymont was not incorporating partial air return through a baghouse to control particulate emissions from LKD unloading operations, as required by permit.

Under the permit modification, Graymont removed the existing Aeropulse baghouse equipped with a 900-acfm fan from the syncoal silo (T-290) and re-installed the baghouse with associated inlet header and ductwork, on the South #1 Kiln Cyclone Silo to achieve compliance with the previously cited condition(s). Silo T-290 utilized two baghouses, a 1000 cfm Micropul baghouse, permitted under Permit #1554-14, and the previously described 900 cfm Aeropulse baghouse. Fuel loading operations at silo T-290 did not require the use of both baghouses and the existing 1000 cfm Micropul baghouse was sufficient to effectively control particulate emissions from the fuel transfer operations to and from the silo. Installation and operation of the 900 cfm Aeropulse baghouse brought Graymont into compliance with the previously cited permit requirements.

Further, on May 31, 2002, the Department received a second request for permit modification under ARM 17.8.705(1)(r)(i). In the second modification request, Graymont proposed the use of on-specification used oil to fire the rotary lime kilns at the facility. Subsequently, on July 18, 2002, the

Department received notification from Graymont that the proposal to fire the kilns with on-specification used oil was being withdrawn. Permit **#1554-15** replaced Permit #1554-14.

D. Current Permit Action

On September 2, 2004, the Department received notification from Graymont of facility changes in accordance with the provisions of ARM 17.8.745(1) (de minimis rule). Specifically, current coal handling operations involve truck unloading/dumping of coal and transfer of coal to a coal stockpile via a front-end loader. Under the proposed de minimis action, Graymont is adding two portable coal conveyors to accommodate a portion of coal handling activities. Incorporation of the 2 new portable conveyors will result in the addition of 3 new coal material transfer points. The current permit action adds the portable conveyors to the list of equipment at the Graymont facility. An emission inventory demonstrating compliance with the de minimis rule is contained in Section III, Emission Inventory, of the permit analysis to this permit.

In addition to the above cited de minimis notification, Graymont proposed an administrative amendment (AA) to Permit #1554-15 to allow for baghouse control of quarry drilling operations. Under Permit #1554-15, Graymont is required to use skirting and water spray to control fugitive dust emissions resulting from drilling operations. Under the proposed AA, Graymont would utilize skirting and baghouse control for certain drilling operations and skirting and water spray for other operations. Since the use of skirting and baghouse control would provide equivalent or greater control of fugitive dust when compared to skirting and water spray, the Department determined that this proposed change can be accomplished under an AA. Under the current permit action, Section II.A.4 has been modified to accommodate this operating change. Permit **#1554-16** replaces Permit #1554-15.

E. Additional Information

Additional information, such as applicable rules and regulations, BACT determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARMs and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies, where appropriate.

A. ARM 17.8, Subchapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
2. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Graymont shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

3. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.
4. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring, and ARM 17.8.206 Methods and Data. These sections require Graymont to perform all monitoring required as a condition of the permit in accordance with the Montana Quality Assurance Manual and the EPA Quality Assurance Manual.
2. ARM 17.8.210 Ambient Standards for SO₂, and ARM 17.8.223 Ambient Standards for PM₁₀. Graymont must demonstrate compliance with the applicable ambient air quality standards. Graymont demonstrated compliance with the appropriate ambient air quality standards.

C. ARM 17.8, Subchapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. This rule requires an opacity limitation of 20% for all fugitive emissions, and that no person shall authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control airborne particulate matter are taken.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule states that a source may not combust fuel with a sulfur content greater than that allowed by this rule. Graymont submitted information demonstrating compliance with this requirement.
6. ARM 17.8.340 Standards of Performance for New Stationary Sources. The owner and operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.

40 CFR, Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants, does apply to the lump breaker, the coal hopper, and any coal conveying equipment constructed, reconstructed, or modified after October 24, 1974.

40 CFR, Part 60, Subpart HH, Standards of Performance for Lime Manufacturing Plants, does

apply to Lime Kiln #1 and Lime Kiln #2.

40 CFR, Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants does apply to C213, C214, and C215. It was thought, during review of Permit Application #1554A-2, that the crusher was an affected facility. Based on further review, it has been determined that the crusher is not an affected facility. However, Graymont does have three conveyors in the lime plant that were constructed in 1990. These conveyors are identified as C213, C214, and C215. The conveyors are used to convey limestone to one of two surge bins and from there to one of the two kilns. Since limestone is a nonmetallic mineral, and the conveying equipment is associated with a nonmetallic mineral processing plant located at a lime plant, the Department has determined that these three conveyors are subject to NSPS Subpart OOO. In addition, if any of the proposed equipment to be used at the limestone processing operation was constructed, reconstructed, or modified after August 31, 1983, that equipment would be subject to Subpart OOO.

D. ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. Graymont shall submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper permit application fee is paid to the Department. The current permit action is an administrative permit action and does not require a fee.
2. ARM 17.8.505 Air Quality Operation Fees. An air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the PTE greater than 25 tons per year of any pollutant. Graymont has a PTE greater than 25 tons per year of PM, PM10, NOx, and SOx; therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permit--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. The current permit action is an AA and does not require public notice or an application for permit modification.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action is an AA and also adds new equipment to the permit under ARM 17.8.745; therefore, a BACT analysis is not required.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Graymont of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be

transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8, Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

Graymont is a major stationary source of emissions located in an area which is considered either attainment or unclassified for all pollutants. The current permit action will not cause a net emission increase greater than the applicable NSR/PSD significance levels and; therefore, does not require NSR/PSD review.

G. ARM 17.8, Subchapter 12, Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the Federal Clean Air Act (FCAA) is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. Sources with the PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. Graymont was issued final and effective Operating Permit #OP1554-00 on June 11, 2001, and final and effective Operating Permit #OP1554-01 on October 2, 2001, for significant modifications to the existing operating permit.

III. Emission Inventory

A more detailed emission inventory is contained in Graymont's Permit Application #1554A-2.

A. Particulate (tons/year controlled)

1.	Drilling	0.01
2.	Blasting	2.6
3.	Limestone Loading	7.4
4.	Ore Dumping	1.8
5. & 6.	Ore Crushing & Screening	7.4
7.	Ore Erosion	5.3
8.	Radial Stacker	4.0
9.	Stockpile Erosion	10.6
10.	Stone Screen and Conveyer	4.1
11.	Kiln #1	63.9
12.	Kiln #2	31.9
13.	Lime Baghouses	0.3
14.	Lime Loadout	2.7

15.	Fine Dust Silo	0.3
16.	Railroad Loadout	3.1
17.	Coal Handling	2.25
18.	Quarry Roads	13.2
19.	Sales and Coal Road	108.4
20.	Lime Hydrator	11.1
21.	Lime Handling (for hydrator)	0.4
22.	Hydrated Lime Handling	3.8
23.	<u>Truck Loading (hydrated lime)</u>	<u>0.6</u>

TOTAL PARTICULATE EMISSIONS 285.51 Tons/year

B. Non-Particulate Emissions

SOURCE	tons/year			
	NO _x	SO ₂	CO	VOC
Lime Kiln #1	438.00	139.30	573.78	5.48
Lime Kiln #2	438.00	139.30	573.78	5.48
Total	876.0	278.6	1147.6	11.0

- Calculations supporting SO₂, CO and VOC estimated emissions are contained in the analysis for Permit #1554-06.

C. Air Toxics

tons/year

Pollutant ¹	VOC or Particulate	Amount (tons/yr)
Methane	VOC	2.7
Ethane	VOC	1.2
n-Butane	VOC	1.0
Formaldehyde	VOC	1.6
Aluminum	Particulate	1.8
Sulfur	Particulate	6.7
Chlorine	Particulate	2.3

Other air toxics identified in previous permits (tons/year):

<u>Arsenic</u>	<u>Cadmium</u>	<u>Chromium</u>	<u>Nickel</u>	<u>Selenium</u>
0.01	0.0002	0.01	0.13	0.03

D. Permit #1554-16 Emissions

Portable Conveyor Emissions

PM Emissions

Emission Factor: 0.0014 lb/ton (AP-42, Section 13.2.4-3, Equation 1)

Capacity: 120 ton/hr/conveyor

Calculations: 0.0014 lb/ton * 120 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.736 ton/yr/transfer point
0.736 ton/yr/transfer point * 3 transfer points = 2.21 ton/yr

PM₁₀ Emissions

Emission Factor: 0.00066 lb/ton (AP-42, Section 13.2.4-3, Equation 1)

Capacity: 120 ton/hr/conveyor

Calculations: 0.00066 lb/ton * 120 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.347 ton/yr/transfer point
0.347 ton/yr/transfer point * 3 transfer points = 1.04 ton/yr

¹ These air toxics are estimated to have more than 1 ton/yr of emissions. A more complete listing is contained in the application.

Drilling Emissions

DM 30 Drill Rig

PM/PM₁₀ Emissions

Emission Factor: 0.02 gr/dscf (EPA – Fabric Filter Emission Factor)
Capacity Flow Rate: 3000ft³/min (Manufacturers Specifications)
Operating Rate: 8 min/hole
Calculations: $0.02 \text{ gr/dscf} * 3000 \text{ dscf/min} * 8 \text{ min/hole} * 1 \text{ lb/7000 gr} = 0.17 \text{ lb/hole}$

ECM 370 Drill Rig

PM/PM₁₀ Emissions

Emission Factor: 0.02 gr/dscf (EPA – Fabric Filter Emission Factor)
Capacity Flow Rate: 1200ft³/min (Manufacturers Specifications)
Operating Rate: 8 min/hole
Calculations: $0.02 \text{ gr/dscf} * 1200 \text{ dscf/min} * 8 \text{ min/hole} * 1 \text{ lb/7000 gr} = 0.069 \text{ lb/hole}$

IV. BACT Determination

A BACT determination is required for each new or altered source. Graymont shall install on the new sources the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action is an administrative amendment and a BACT analysis and determination are not required.

V. Existing Air Quality

The air quality of this area is classified as either Better than National Standards or unclassifiable/attainment of the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The current permit action will not result in any increase in emissions; therefore, no effect on air quality in the area will be realized.

VI. Air Quality Impacts

Because the current permit action will not increase emissions from the facility, the proposed permit action will not cause an exceedance of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

The current permit action is an administrative amendment and does not require an environmental assessment.

Permit Analysis Prepared By: M. Eric Merchant, MPH

Date: September 7, 2004